

# ABSTRACT

The present invention provides methods for monitoring disease states in a subject, as well as methods for monitoring the levels of effect of therapies upon a subject having one or more disease states. The methods involve: (i) measuring abundances of cellular constituents in a cell from a subject so that a diagnostic profile is obtained, (ii) measuring abundances of cellular constituents in a cell of one or more analogous subjects so that perturbation response profiles are obtained which correlate to a particular disease or therapy, and (iii) determining the interpolated perturbation response profile or profiles which best fit the diagnostic profile according to some objective measure. In other aspects, the invention also provides a computer system capable of performing the methods of the invention, data bases comprising perturbation response profiles for one or more diseases and/or therapies, and kits for determining levels of disease states and/or therapeutic effects according to the methods of the invention.

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